

REMARKS/ARGUMENTS

The Office Action of December 10, 2004 has been carefully reviewed and this response addresses the Examiner's concerns stated in the Office Action. All objections and rejections are respectfully traversed.

Claims 1-57 are still pending in the application. Claims 1-57 have been rejected.

Claim Rejections - 35 USC § 102(e)

On pages 2-8, paragraph 3 of the Office Action, Examiner has rejected claims 1-19, 21-39, and 41-57 under 35 U.S.C. § 102(e) as being anticipated by Zhu et al, U.S. Patent No. 6,567,813, issued on May 20, 2003 (Zhu). Applicant respectfully points out that "[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628 (CAFC, 1987), M.P.E.P. § 2131. As provided by the remarks set forth below, clearly this is not the case with the present rejection of the claims. In summary, Zhu does not anticipate Applicant's invention because:

(1) Applicant's invention deals with managing gateways. A gateway is defined as a node or network that serves as an entrance to another network. Applicant directs Examiner's attention to the definition of gateway at www.webopedia.com/TERM/g/gateway.html. For example, in an enterprise, a gateway computer is used to connect a workstation to an outside network. As another example, in a home, an Internet Service Provider (ISP) provides a gateway between a user's home computer and the Internet. A gateway is sometimes known as a proxy server, and can be associated with, for example, a router or a switch. The system and method of Applicant manages gateways that are each associated with one or more network elements such as, for example, routers, switches, and modems. In the system and method of Applicant, if a gateway fails, the network elements that are associated with the failed gateway are automatically associated with an operational gateway.

(2) Zhu discloses a collaborative computer system for providing an electronic conference that is scalable to handle an arbitrary number of conference participants. The

collaborative computer system of Zhu includes collaborative servers and clients. A server, defined as a computer or device on a network that manages resources. Applicant directs Examiner's attention to the definition of server at www.webopedia.com/TERM/s/server.html. A server can be dedicated to one function, such as a file server that is dedicated to responding to requests for files by locating and delivering them to a requester. In the invention of Zhu, the replicated servers are dedicated to collaboration in support of electronic conferencing. The collaboration servers of Zhu are not nodes or networks that serve as an entrances to other networks, but instead are computers that manage the resources required for users to electronically conference with each other.

The system of Zhu also includes at least one client, defined to be a computer that is part of a client/server architecture. Applicant directs Examiner's attention to the definition of client at www.webopedia.com/TERM/c/client.html. In a typical client/server architecture, such as the client/server architecture of Zhu, the client relies on the server to perform some operations and/or provide resources. The clients of Zhu, for example, request entry into a conference, and the collaboration servers of Zhu respond to the request by admitting the user to the conference and establishing the user as a member with respect to the other members. The client of Zhu is not managed by the collaboration server and is therefore not equivalent or analogous to Applicant's network element.

In summary, an analogy between the gateways of Applicant and the collaboration servers of Zhu fails because a gateway is a node on a network that serves as an entrance to another network, while a collaboration server manages resources for electronic conferencing. Likewise, an analogy between the network elements of Applicant and the clients of Zhu fails because network elements are managed by the gateway while resources used to enable clients to participate in an electronic conference are managed by the collaboration server.

On pages 2, 5, 6, and 8 of the Office Action, with respect to independent claims 1, 27, and 44,

(1) Examiner states that Zhu teaches (claim 1) a method for recovering management of one or more network elements, said method comprising: monitoring operation of a plurality of distributed gateways (380A, 380B, 380C of fig. 3), each of said gateways responsible for managing one or more (plurality of) network elements and means for detecting failure of any one of said distributed gateways (clients 210A-210D of fig. 2B). Examiner also states that Zhu teaches (claim 27) a system comprising a plurality of network elements (210A-210D FIG. 2B) and a plurality of gateways (220A, 220B FIG. 2B) communicatively coupled to the plurality of network elements. Examiner further states that Zhu teaches (claim 44) a system comprising a plurality of distributed gateways (CB servers 380A-380C FIG. 3), each for managing one or more network elements (clients) and means (355 FIG. 3) communicatively coupled to said plurality of distributed gateways for detecting failure of any one of said distributed gateways (detecting failure of servers). (FIGs. 2B, 3, abstract, col. 3, line 55 to col. 4, line 65).

As a rebuttal to Examiner's position, Applicant respectfully points out that Zhu discloses a client/server architecture to implement a collaborative computer system. The function of the collaborative servers is to manage an electronic conference. The function of the clients is to allow users to join and leave the conference, or to start a conference. The system of collaborative servers is divided into meeting zones and web zones, and includes a central operation database. Each meeting zone has a zone manager, a communications and control module that monitors logical servers and reports information about the logical servers to a zone manager known as the gatekeeper.

Applicant, on the contrary, claims a system and method having a plurality of distributed gateways, which are not, as shown above, equivalent to the collaborative servers of Zhu. Applicant further claims a system and method having a means for managing one or more network elements, or for recovering management of one or more network elements, that includes monitoring the operation of a plurality of gateways in which each gateway manages one or more network elements. As discussed above, network elements are not equivalent to the clients of Zhu. Whereas Zhu discloses

collaboration servers to provide electronic conferencing, Applicant claims a system and method for managing network elements through monitoring the operation of distributed gateways, which manage the network elements. Nowhere does Zhu disclose a gateway. Nowhere does Zhu disclose the management of network elements by monitoring the operation of a gateway that is responsible for the management of network elements. Even if the clients of Zhu were analogous to Applicant's network elements, nowhere does Zhu disclose that the collaboration servers perform the functions of a gateway.

(2) Examiner states that Zhu teaches (claim 1) the step of detecting failure of one of said distributed gateways, or a gateway monitoring system communicatively coupled to said plurality of distributed gateways (gateways of collaboration servers 380A, 380B, 380C of fig. 3 connected to Clients as network elements).

As a rebuttal to Examiner's position, Applicant respectfully refers to previous discussions in which the analogy between collaboration servers and gateways fails. Thus, the failure detection of Zhu, in which collaborative servers detect failure in each other and provide for failover, is not analogous to Applicant's detecting failure of one of said distributed gateways that manages one or more network elements. Applicant reiterates that nowhere does Zhu disclose a gateway, or the detecting of failure of a distributed gateway.

(3) Examiner states that Zhu teaches (claims 1, 27, and 44), responsive to detecting failure, recovering management of said one or more network elements (determining that collaboration server 380n has failed and performing recovery procedures Clients 210A-210D of fig. 2B) for which said failed gateway had management responsibility by assigning management responsibility to at least one other of said plurality of distributed gateways (keeping the load balance between Collaboration servers 380's in the zone by performing failure detection and recovery operation, see fig. 2B, col. 4, line 58 to col. 5, line 67 and col. 9 lines 1-38).

As a rebuttal to Examiner's position, Applicant respectfully points out that Zhu discloses that the meeting manager detects if a collaboration server in the meeting zone has failed. If a collaboration server has failed, Zhu discloses retrieving a list of electronic conferences (meetings) handled by the failed collaboration server and then launches a new collaboration server that recovers information about the failed server from the gatekeeper.

Applicant, on the contrary, claims recovering management of network elements managed by the failed gateway by assigning management responsibility to another gateway. As previously pointed out, nowhere does Zhu disclose a gateway, which is not analogous to the collaboration server of Zhu.

Since Zhu does not anticipate and/or make obvious each and every element of Applicant's claims 1, 27, or 44, either expressly or inherently, Applicant's claims 1, 27, and 44 (as well as claims 2-26, 28-43, and 45-57 that depend, either directly or indirectly, therefrom and that further define the invention) are not made obvious by Zhu, and a rejection under 35 U.S.C. § 102(e) is inappropriate. Applicant asserts that claims 1, 27, and 44 (as well as claims 2-26, 28-43, and 45-57 that depend, either directly or indirectly, therefrom) are now in condition for allowance. Applicant respectfully requests the withdrawal of rejections under 35 U.S.C. § 102(e) (and 35 U.S.C. 103 (a)) with regards to dependent claims 20 and 40) for the reasons set forth above. Furthermore, a 35 U.S.C. § 103 rejection of these claims would be inappropriate as well. Applicant's claimed invention is not an obvious extension of the use of Zhu to meet Applicant's patentable limitations.

To further Applicants' position of the patentability of claims 2-26, 28-43, and 45-57, Applicants note the following.

On page 6 of the Office Action, with respect to dependent claim 28, which depends from claim 27, Examiner states that Zhu discloses said management recovery system is operable to assign management responsibility of said one or more network elements for which said detected failed gateway had management responsibility to at least one other of said plurality of distributed gateways (performing failure detection and recovery operation) (FIG. 2B, col. 4, line 58 – col. 5, line 67, col. 9, lines 1-38). As a rebuttal to Examiner's position, Applicant respectfully refers Examiner to the explanation of Zhu's disclosure with respect to Claims 1, 27, and 44. Applicant, on the contrary, claims a system that includes network elements, gateways, a gateway monitoring system, and a management recovery system, where the management recovery system is operable to assign management responsibility of the network elements for which detected failed gateways had management responsibility to other gateways. Nowhere does Zhu disclose a

gateway, or the assignment of management responsibility from a failed gateway to another gateway. As previously described, Applicant's gateway and Zhu's collaboration server are not analogous, and thus the fact that Zhu provides for the generic function of failing over does not anticipate the reassignment of management responsibility of network elements from one gateway to another.

On pages 3, 7, and 8 of the Office Action, with respect to dependent claims 2, 3, 36, 47, and 54, which depend from claims 1, 27, and 44, Examiner states that Zhu discloses translating a communication protocol utilized by said one or more network elements, that said plurality of distributed gateways (380A, 380B, 380C of FIG. 3) are communicatively coupled to a processor-based management system, and translating a common communication protocol as said detected failed gateway (see FIG. 3, lines 5-53 and col. 9, lines 23-67).

Applicant assumes Examiner is referring to col. 5, lines 5-53. As a rebuttal to Examiner's position, as Applicant has previously pointed out, Zhu discloses that the gatekeeper provides information to a meeting manager to enable load balancing and adequate response times across the collaboration servers. Clients enter a conference by attempting to connect to ping servers in multiple meeting zones and connecting to the first ping server that responds. The ping server forwards the request to the meeting manager that assigns a collaboration server to the client. Zhu discloses that zone managers communicate with each other through TCP/IP or WebEx Transport Layer. Zhu discloses failure detection in which a list of electronic conferences (meetings) handled by the failed collaboration server is provided to the meeting manager that then launches a new collaboration server that recovers information about the failed server from the gatekeeper.

Applicant, on the contrary, claims that the distributed gateways manage one or more network elements by translating a communication protocol utilized by the network elements. Applicant reiterates that a gateway is a node on a network that serves as an entrance to another network. Applicant claims a gateway that translates a communication protocol. Applicant further claims that the gateways are communicatively coupled to a processor-based management system. Applicants still further claim that available gateways can translate common communication protocols as said detected failed gateway. Nowhere does Zhu disclose a processor-based management system nor the translation of

communication protocols. Nor, as previously stated, does Zhu disclose a gateway. Thus, Zhu neither discloses that the gateway manages network elements by translating communication protocols, nor that the gateway is communicatively coupled with a processor-based management system. Zhu lists protocols that can be used between zone managers or between client and server. Zhu does not disclose translating protocols, but instead discloses mutually exclusive protocols that can be used, for example either TCP/IP or the WebEx Transport layer.

On pages 3-5 and 7-8 of the Office Action, with respect to dependent claims 4-19, 21-26, 29-35, 37-39, 41-43, 45-46, 48-53, and 55-57, which depend from independent claims 1, 27, and 44) Examiner states that Zhu discloses all the elements of the above-referenced claims. Examiner states that, with respect to claims 4-6 and 29-31 on page 3 of the Office action, Zhu provides services such as polling. Examiner states that, with respect to claims 7-9, 32-33, 48, 50, and 51, on pages 3, 7, and 8 of the Office action, Zhu determines that collaboration server 380n has failed and performs recovery procedures. Examiner states that, with respect to claims 10-12, 34, 35, 49, 52, and 53, on pages 3, 4, 7, and 8 of the Office action, detecting a failure server is the same as detecting failed gateway. (See col. 6, lines 1-56 and col. 7, lines 8-61).

Applicant respectfully points out that Zhu discloses (col. 6, lines 1-56) servers that support the collaboration servers, such as a log server and a license manager. Zhu discloses process-level fault monitoring and correction that is implemented by a gatekeeper that replicates the logical server state. Zhu discloses physical server fault tolerance by operator hardware and environmental status by monitoring and control methods well-known in the art. Zhu further discloses (col. 7, lines 8-61) that if a user is requesting to join a new conference, meeting parameters are extracted from a meeting database and a plug-in for a client browser is launched and installed on the client. After the plug-in is installed on the client, the plug-in can be used for subsequent conferences without the need for downloading and reinstalling it. The client becomes connected with a collaboration server through a ping server (as previously discussed).

Applicant claims (Claim 4) that the processor-based management system of claim 3 controls recovering management of one or more network elements for which a failed gateway had management responsibility. As a rebuttal to Examiner's position, Applicant

respectfully points out that nowhere does Zhu disclose a processor-based management system that controls recovering management of network elements from a failed gateway. Zhu discloses a meeting manager that retrieves a list of meetings handled by a failed collaboration server and sends a request to a process manager to launch a new collaboration server (col. 9. lines 1-7). Nowhere in Zhu are gateways or management systems that control the recovery of network elements disclosed. The process manager of Zhu launches collaboration servers but not gateways, and the process manager does not control the recovery of network elements.

Applicant claims (Claim 5) that gateway monitoring systems, communicatively coupled to the distributed gateways, detect failure of one of the distributed gateways. As a rebuttal to Examiner's position, Applicant respectfully points out that, as previously stated, Zhu discloses a process manager that spawns collaboration servers and a meeting manager that checks whether collaboration servers in its zone have failed, but nowhere does Zhu disclose a gateway monitoring system that is communicatively coupled to distributed gateways that detects failure of one of the distributed gateways. The distributed gateways of Applicant, which manage network elements, are not analogous to the collaboration servers of Zhu.

Applicant claims (Claim 6) that detection of failure can be through polling the distributed gateways. Applicant further claims (Claim 31) that the gateway monitoring system can poll the gateways. Applicant still further claims (Claim 48) a system having a means for detecting failure that includes logic for polling the distributed gateways, and that the logic includes software code executable by the means for detecting failure (Claim 49). As a rebuttal to Examiner's position, Applicant respectfully points out that, as previously pointed out, nowhere does Zhu indicate that gateways are polled to detect failure. Zhu discloses that app servers 390n are used by collaboration servers 380n and client browsers 320 to support services such as document view, file sharing, video, voice over IP telephony, polling, chat, and application sharing. Zhu also discloses that license manager 360 polls meeting database to ensure the number of users authorized to join a begin is not exceeded. Nowhere does Zhu disclose polling gateways to determine if they have failed.

Applicant claims (Claim 7) one or more gateway monitoring systems controlling the recovering of management of the network elements. As a rebuttal to Examiner's position, Applicant respectfully points out that Zhu discloses a process manager 311 that monitors the health of the collaboration server on the physical server and spawns a replacement process upon failure of the collaboration server (col. 4, lines 39-43). Nowhere does Zhu disclose a gateway monitoring system controlling the recovery of management of the network elements for which the failed gateway had management responsibility.

Applicant claims (Claim 8) determining management activities for which a detected failed gateway is responsible for performing. Applicant further claims (Claim 32) a system having a management recovery system that determines management activities for which the detected failed gateway is responsible for performing. Applicant still further claims (Claim 33) that the management recovery system can determine an available gateway, from the distributed gateways, that is available for assuming at least a portion of the management activities of the detected failed gateway. Applicant yet still further claims (Claim 50) a system including a means for determining management activities for which the detected failed gateway is responsible for performing. Applicant yet still further claims (Claim 51) a means for determining an available gateway from the distributed gateways that are available for assuming at least a portion of the management activities of the detected failed gateway. As a rebuttal to Examiner's position, Applicant respectfully points out that, while Zhu discloses a meeting manager that retrieves a list of meetings handled by the collaboration server and sends a request to the process manager to launch a new collaboration server (col. 9, lines 1-7), Applicant claims a step of, a means for, and a management recovery system that determine management activities for which a failed gateway was responsible. Applicant claims a method and system in which a gateway provides management activities. When the gateway fails, Applicant's method and system provide for transferring the management activities to another gateway. Zhu's list of meetings and Applicant's management activities are clearly different. Zhu's collaboration server requires a list of meetings in order to properly respond to client requests, whereas Applicant's gateway requires management activities in order to manage the network elements that are assigned to the gateway to manage.

Applicant claims (Claim 9) determining available gateways from a plurality of distributed gateways that are available, and wherein (Claims 10, 34, and 52) the available gateways are a subset of the plurality of distributed gateways. Applicant further claims (Claims 11, 35, and 53) that available gateways are gateways that are local to the detected failed gateway. As a rebuttal to Examiner's position, Applicant respectfully points out that Applicant determines available gateways in order to reassign management responsibility for network elements from a failed gateway to a new available gateway. Zhu discloses that if a collaboration server fails, another collaboration server is launched. Nowhere does Zhu disclose determining an available gateway for the purpose of transferring management responsibility from a failed gateway to an available gateway. Nowhere does Zhu disclose that the available gateway is local to the failed gateway.

Applicant claims (Claim 12) that two or more of the plurality of distributed gateways can be grouped, and that determining one or more available gateways includes determining gateways that are included in a common grouping with the detected failed gateway (Claim 13). Applicant further claims (Claim 14) that the grouping is based on criteria selected from the group consisting of gateway communication protocol, gateway location, and any user-defined criteria. Zhu discloses zone management of collaboration servers so that meeting managers can respond appropriately to client data requests (col. 5, lines 27-35). As a rebuttal to Examiner's position, Applicant respectfully points out that nowhere does Zhu disclose grouping of gateways. Nowhere does Zhu disclose grouping criteria based on gateway communication protocol, gateway location, or user-defined criteria.

Applicant claims (Claim 18) that load balancing includes determining an operational load for management activities and allocating the management activities to available gateways to balance their operational loads, where the operational loads are determined dynamically (Claim 19). As a rebuttal to Examiner's position, Applicant respectfully points out that Zhu discloses quality of service concept as related to a zone that includes collaboration servers. If the quality of service falls below a certain threshold, Zhu discloses adding collaboration servers to the zone (col. 5, lines 33-53). Applicant claims allocating of management activities across gateways to balance the load for each gateway. Nowhere does Zhu disclose load balancing with respect to distributed gateways.

Applicant claims (claim 30) that the gateway monitoring system and the management recovery system are integrated on a common platform. As a rebuttal to Examiner's position, Applicant respectfully points out that Zhu discloses collaboration server computers that are autonomous (380A-C FIG. 3), as well as autonomous process manager 311, license manager 360, meeting manager 350, log server 370, and application server 390A-C. Even if Zhu did disclose gateway monitoring, which he does not, Zhu's process manager 311 and the meeting manager 350, involved in collaboration server failure and recovery, are not on a common platform. Nowhere does Zhu disclose a gateway monitoring system and a management recovery system that are integrated on a common platform.

Applicant claims (Claim 55) that the means for autonomously recovering management includes logic for allocating management activities of the failed gateway to another gateway. As a rebuttal to Examiner's position, Applicant respectfully points out that fault monitoring and correction in Zhu are organized by a meeting manager that possesses a special zone manager called a gatekeeper which tracks the status of all the collaboration servers and other servers in a zone. As previously pointed out, collaboration servers are not equivalent to Applicant's gateway, and thus, allocating management activities, even if it were present in Zhu, would not be equivalent to Applicant's allocating management activities with respect to gateways.

Examiner states that, with respect to claims 15-17, 21-23, 37, 38, 46, and 56, on pages 4, 5, 7, and 8, of the Office action, Zhu discloses using replacement servers. Examiner states that, with respect to claims 24-26, 42, 43, and 45, on pages 5, 7, and 8 of the Office action, Zhu discloses determining that collaboration server 380n has failed and performing recovery procedures. (FIG. 9, col. 7, lines 8-61, col. 9, line 23 – col. 10, line 51)

Applicant respectfully points out that Zhu discloses (FIG. 9, col. 9, line 23 – col. 10, line 51) failure and recovery mechanisms for support servers such as the application server, the license manager, the log server, and the meeting manager. Zhu discloses that, as discussed previously, communication among system components can be enabled through one of several protocols including TCP/IP and WebEx. Zhu discloses that, in order to provide bi-directional communications, the client actively polls the server in order

to fetch data that may be sent from the server to the client. If the case of an application server failure, any collaboration servers that are connected to the failed server are placed in a suspend state and the meeting manager requests that the process manager launches a new applications server. After the application server has been launched, the meeting manager resumes the collaboration server and connects it to the new applications server.

Applicant claims (Claim 15) distributing management activities of the failed gateway to at least one available gateway. Applicant further claims (Claim 21) distributing the management activities of the failed gateway to at least one of the distributed gateways. Applicant still further claims (Claim 22) that distributing is autonomously performed by a processor-based system. Applicant yet still further claims (Claim 37) that the management recovery system distributes the management activities of the detected failed gateway to an available gateway. As a rebuttal to Examiner's position, Applicant respectfully points out that, while Zhu discloses a meeting manager that retrieves a list of meetings handled by the collaboration server and sends a request to the process manager to launch a new collaboration server (col. 9, lines 1-7), Applicant claims a step of, a means for, and a management recovery system that distributes, possibly autonomously by a processor-based system, management activities for which a failed gateway had been responsible. Applicant claims a method and system in which a gateway provides management activities. When the gateway fails, Applicant's method and system provide for distributing the management activities to an available gateway or to one of a set of distributed gateways. Zhu's list of meetings and Applicant's management activities are clearly different. Zhu's collaboration server requires a list of meetings in order to properly respond to client requests, whereas Applicant's gateway requires management activities in order to manage the network elements that are assigned to the gateway to manage.

Applicant claims (Claims 16 and 23) determining operation load of the available or distributed gateways and performing load balancing in distributing management activities. Applicant further claims (Claim 38) that the management recovery system determines the operational load of the available gateways and performs load balancing in distributing the management activities to the available gateways. Applicant still further claims (Claim 17) that load balancing is performed autonomously by a processor-based system. Applicant

yet still further claims (Claim 39) that performing load balancing is operable to determine the operational load for the management activities, and to allocate the management activities to one or more gateways to balance their operational loads. Applicant yet still further claims (Claim 56) a means for determining operational load of available gateways, wherein the means for autonomously recovering management includes logic for performing load balancing in allocating the management activities to an available gateway. Applicant claims (claim 57) a means for determining operational load for the management activities wherein the means for autonomously recovering management includes logic for allocating management activities to one or more available gateways to approximately balance their operational loads. As a rebuttal to Examiner's position, Applicant respectfully points out that, as stated previously, Zhu discloses quality of service concept as related to a zone that includes collaboration servers. If the quality of service falls below a certain threshold, Zhu discloses adding collaboration servers to the zone (col. 5, lines 33-53). Applicant claims allocating of management activities across gateways to balance the load for each gateway. Nowhere does Zhu disclose load balancing with respect to distributed gateways.

Applicant claims (claim 24) that the distributed gateways translate a plurality of different communication protocols. Applicant further claims (claim 29) a system in which managing one or more network elements includes translation of a communication protocol utilized by the one or more network elements. As a rebuttal to Examiner's position, Applicant respectfully points out that Zhu discloses that communication protocols such as TCP/IP and WebEx can be used between client and server. If the client and server are using the same protocol, as they are in Zhu, there is no need for Zhu to translate communication protocols. Applicant, on the contrary, claims translation of protocols because the network elements (reference number 214 in Applicant's FIG. 2) that are being managed by the gateways (reference numbers 210-213 in Applicant's FIG. 2) could be communicating using different protocols from the network (reference number 205 in Applicant's FIG. 2) to which the gateways provide an interface.

Applicant claims (claim 25) a method of recovering management of one or more network elements including the step of the user's predefining a gateway to be used in recovering management of one or more network elements. Applicant further claims

(claim 26) the step of the user's predefining criteria to be used in recovering management of one or more network elements in the even of a failure of a gateway. Applicant's method and system allow for a user to designate which gateway will be used to assume management responsibilities for a failed gateway. Nowhere does Zhu disclose predefining a gateway to be used in recovering management of one or more network elements.

Applicant claims (Claim 41) that the management recovery system includes software code to present a user interface to alert the user of a detected failed gateway. Applicant claims (claim 42) that the management recovery system includes software code to present a user interface that enables a user to predefine gateways that can be used to recover one or more network elements. Applicant further claims (claim 43) software code executable by the management recovery system to present a user interface that enables a user to pre-define criteria to be used in recovering management of one or more network elements in the event of failure of a gateway. Zhu discloses a user interface with respect to a client browser, but nowhere does Zhu disclose alerting a user through a user interface of a failed gateway, nor does Zhu allow a user through a user interface to predefine gateways and/or criteria that can be used to recover network elements. In fact, maintenance activity with respect to the server in Zhu, for example, adding new servers or managing failed servers, is transparent to the user who is interfacing with the system through the client browser in the system of Zhu.

Since Zhu does not anticipate each and every element of Applicant's dependent claims 2-19, 21-26, 28-39, 41-43, and 45-57, either expressly or inherently, Applicant's dependent claims 2-19, 21-26, 28-39, 41-43, and 45-57, are not anticipated by Zhu, and a rejection under 35 U.S.C. § 102(e) is inappropriate. Applicant asserts that dependent claims 2-19, 21-26, 28-39, 41-43, and 45-57 are now in condition for allowance. Applicant respectfully requests the withdrawal of rejections under 35 U.S.C. § 102(e) with regards to dependent claims 2-19, 21-26, 28-39, 41-43, and 45-57 for the reasons set forth above. Furthermore, a 35 U.S.C. § 103 rejection of these claims would be inappropriate as well. Applicant's claimed invention is not an obvious extension of the use of Zhu to meet Applicant's patentable limitations.

Claim Rejections - 35 USC § 103

On page 9 of the Office Action, Examiner has rejected dependent claims 20 and 40, which depend on claims 1 and 27, under 35 U.S.C. § 103(a) as being unpatentable over Zhu in view of Wolf et al., United States Patent Number 6,374,297, issued April 16, 2002 (Wolf).

Applicant respectfully points out that Examiner's cited reference, Wolf, was published on April 16, 2002, almost a year after the filing date of the present application, May 29, 2001. Applicant respectfully reserves the right to file a petition under 37 C.F.R. § 1.131 to swear behind Wolf.

On page 9 of the Office Action, in paragraph 5, with respect to dependent claims 20 and 40,

(1) Examiner states that Zhu's teachings still apply as set out above.

As a rebuttal to Examiner's position, Applicant respectfully points out that Zhu fails as a reference under 35 U.S.C. § 103 for the same reasons recited above with respect to the 35 U.S.C. § 102 rejection. Therefore, Applicant asserts that Zhu does not anticipate Applicant's invention for the reasons stated above.

(2) Examiner states that Zhu does not specifically disclose load balancing is performed according to a greedy algorithm.

(3) Examiner states that Wolf discloses load balancing is performed according to a greedy algorithm (using a logical assignment of overlapping clusters is updated periodically via a greedy algorithm) (col. 9, lines 25-62, col. 17, lines 35-52).

Applicant respectfully points out that Wolf discloses an example of a load balancing method (col. 9, lines 25-62) and a method for balancing load across a plurality of web servers of a web server farm hosting multiple web sites designed to handle multiple customers including the step of logically assigning each web site to one or more servers according to various predetermined criteria. The set of all servers to which a particular web site is assigned is called its cluster (col. 1, lines 64-66), and clusters can overlap so that more than one web site can be assigned to a server. Wolf discloses that the

logical assignment of overlapping clusters is updated periodically via a greedy algorithm that includes steps for reoptimizing the topology of the underlying assignment graph.

Applicant, on the contrary, claims (Claim 20) a method for recovering management of one or more network elements including the steps of determining management activities for which a detected failed gateway is responsible for performing, determining one or more available gateways from the distributed gateways that is available for assuming at least a portion of the management activities of the detected failed gateway, distributing the management activities of the detected failed gateway to at least one of the available gateways, determining operational load of the available gateways, and performing load balancing according to a **greedy algorithm** in distributing the management activities to the available gateways. Applicant further claims (Claim 40) a system including network elements, distributed gateways coupled to the network elements, a gateway monitoring system coupled to the gateways, and a management recovery system coupled to the gateways, where the management recovery system determines management activities that a detected failed gateway is responsible for performing, where the management recovery system determines available gateways that can assume at least a portion of the management activities of the detected failed gateway, where the management recovery system distributes the management activities of the detected failed gateway to at least one of the available gateways, where the management recovery system determines operational load of the available gateways and performs load balancing in distributing the management activities to at least one of the available gateways, and where the management recovery system includes software code implementing a greedy algorithm for controlling load balancing. As a rebuttal to Examiner's position, Applicant respectfully points out that whereas Zhu discloses a client/server architecture and Wolf discloses a method for assigning web sites to servers, together nor separately do they disclose all the elements of Applicant's claimed method and system for detecting failed gateways and load balancing among the remaining gateways that includes the use of a greedy algorithm. Neither Zhu nor Wolf discloses a management recovery system that determines operational load and balances the load. The load balancing of Zhu has to do with the number of clients accessing the server, and the load balancing of Wolf has to do with the number of web sites assigned to a server.

Neither is related to balancing a load of management activities on distributed gateways after a gateway has failed.

(4) Examiner states that it would have been obvious to implement Wolf's algorithm into the computer system of Zhu to balance the load between servers because it would have optimized the topology of the underlying assignment graph in order to react to changing customer activity rates at the various web sites and minimized a maximum diameter of said underlying assignment graph and therefore balanced the load between servers in a communications network.

In order for a rejection under 35 U.S.C. §103 to be sustained, the Examiner must establish a *prima facie* case of obviousness. As pointed out in MPEP § 2142, one of the three criteria to establish a *prima facie* case of obviousness is that the prior art reference(s) must teach or suggest all the claim limitations. To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the reference itself or in the knowledge generally available to one of ordinary skill in the art, to modify the reference. Second, there must be a reasonable expectation of success. Finally, the prior art reference must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in Applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). Further, obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. Applicant asserts that there is no suggestion or motivation in either Zhu or Wolf to perform the claimed subject matter of claims 20 and 40. Since Zhu and Wolf, separately or in combination, do not teach or suggest each and every element of Applicant's dependent claims 20 and 40, which depend upon claims 1 and 27, either expressly or inherently, Applicant's dependent claim 20 and 40 are not made obvious by Zhu and Wolf, and a rejection under 35 U.S.C. § 103(a) is inappropriate. Applicant asserts that dependent claims 20 and 40 are now in condition for allowance. Applicant respectfully requests the withdrawal of the rejection

under 35 U.S.C. § 103(a) with regards to dependent claims 20 and 40 for the reasons set forth above.

Conclusion

Claims 1, 27, and 44 are believed to be in condition for allowance for the reasons provided herein. All dependent claims, 2-26, 28-43, and 45-57, are also allowable for the reasons presented here and above, and further because they depend upon allowable independent claims, and are therefore also in condition for allowance.

Applicant respectfully points out that Examiner's cited reference, Zhu, was published on May 20, 2003, almost two years after the filing date of the present application, May 29, 2001. Applicant is investigating the possibility of swearing behind the cited reference and respectfully reserves the right to file a petition under 37 C.F.R. § 1.131.

Applicant further respectfully points out that Examiner's cited reference, Wolf, was published on April 16, 2002, almost a year after the filing date of the present application, May 29, 2001. Applicant is investigating the possibility of swearing behind the cited reference and respectfully reserves the right to file a petition under 37 C.F.R. § 1.131.

Although no additional fees are anticipated, the Commissioner for Patents is authorized to charge additional fees or credit overpayment to Deposit Account No. 50-1078.

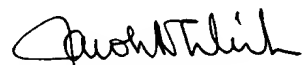
The following information is presented in the event that a call may be deemed desirable by the Examiner:

Jacob N. Erlich (617) 854-4000.

Respectfully submitted,
Semih Secer, Applicant

Date: March 10, 2005

By:



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